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U.S. ENVIRONMENTAL PROTECTION AGENCY

RISK MANAGEMENT PROGRAM INSPECTION REPORT

Facility Name	Inspection Start Date: 11 July 2018 Inspection End Date: 11 July 2018	RMP Submittal Date(s):
Gladieux Processing LLC		01 May 2017
Facility Address	**EPA Facility ID:**	**Rationale for Inspection**
4761 North US 24 East Huntington, IN 46750	1000 0023 1705	☒ High Priority ☐ Region 5 Risk Ranking ☐ Accident ☐ Complaint ☐ Other _____
Latitude/Longitude	**Process ID:**	**Pre-Notification of Inspection**
40.897630 -85.446961	Process NAICS Code: 325998	Yes
Facility Representative (s)	**Title(S)**	**Phone Number(s)**
Tim Wagner Bob Hayes Thomas Black Andrew Marqueling Josh Wagner	President Safety Director (Fort Wayne site) Safety Supervisor (Huntington site) Maintenance Manager Assistant Plant Manager	260-423-4477, Ext. 101
US EPA Inspector (s)	**Title(S)**	**Phone Number(S)**
Greg Chomycia Alice Boomhower	Environmental Engineer Senior Environmental Employee	312-353-8217 312-353-1612

Risk Management Program Elements Evaluated During the Inspection
(X= Evaluated, N = Not Evaluated)

X	Management System	X	Process Safety Information	X	Management of Change	X	Hot Work Permits
X	Hazard Assessment	X	Process Hazard Analysis	X	Pre-Startup Safety Review	X	Contractors
X	Five Year Accident History	X	Operating Procedures	X	Compliance Audits	X	Emergency Response
		X	Training	X	Incident Investigations	X	Risk Management Plan
		X	Mechanical Integrity	X	Employee Participation		

APPLICABILITY

Program Level	Regulated Substance(s)	LEPC	Attachments
Program Level 3	Hydrogen, Anhydrous Ammonia, Sulfur Dioxide, possibly a Flammable Mixture	Huntington County LEPC	Photos

PROCESS DESCRIPTION

Gladieux Energy operates two companies at the Huntington site; Gladieux Terminal and Gladieux Processing. Operations for the two companies are on one contiguous property. Gladieux Processing receives transmix via pipeline and tank truck, stores it in tanks, re-refines it and then distributes it to commercial customers via pipeline and tank truck. The facility filed its first RMP in May 2017 when it constructed a hydrotreater and associated ammonium thiosulfate unit which started up in October 2017. The hydrotreater removes sulfur from diesel product to produce hydrogen sulfide which is then converted to ammonium thiosulfate in the ThioSolv unit, a proprietary technology licensed to Gladieux. Ammonium thiosulfate is sold commercially as a fertilizer.

The re-refining process has not, to date, been identified by the company as subject to RMP. Transmix is a mixture of fuels including gasoline, diesel, and Jet A. When these fuels mix in the pipeline or at a terminal, the mixed fuel is segregated from the specification product and routed for re-refining. Gladieux produces primarily diesel and gasoline cuts. In re-refining, Gladieux also produces light ends which are segregated in 24 interlinked pressure vessels. Facility personnel reported that these vessels contain propane, butane, pentane and associated isomers. These low molecular weight hydrocarbons are stored in the 24 bullet-shaped pressure vessels during the summer months and then mixed with product when fuel vapor pressure restrictions are eased in the fall and winter.

Gladieux Energy (Houston, TX) operates the refining, storage and transportation facility in Huntington IN. There are two operating companies at the site; Gladieux Processing (refinery and storage) and Gladieux Trading and Marketing Company (terminal storage and transportation). The site is rectangular with an operating area about 1000 feet by 1500 feet which includes both the processing and terminal companies. Gladieux has separated these in its regulatory submissions. The RMP does not include any terminal activities. According to the RMP, the facility has approximately 20 full time employees on site. The SPCC and FRP plans present only the terminal operations and the refinery and some oil storage is blanked out in the site plan. EPA inspectors conducted an RMP inspection of Gladieux Processing (refinery and some storage) on July 11, 2018. Another EPA inspection team conducted an SPCC inspection of Gladieux Trading and Marketing (terminal) on August 9, 2018 Both inspection teams noted interconnections between the refinery and terminal and identified that the two operations are co-located.

INSPECTION SUMMARY

Opening and Walkthrough of Facility

EPA inspectors Greg Chomycia and Alice Boomhower met Bob Hayes at the facility entrance and were escorted to the administration building/control room where they were joined by Tim Wagner and Thomas Black. EPA presented credentials and identification. The inspectors explained EPA's confidential business information policy and Tim Wagner reported that the facility does not have an organized labor union. All personnel listed for the facility participated in the introductory meeting, except for Andrew Marqueling, and Josh Wagner who were called upon for specific expertise during the inspection. EPA reviewed the inspection scope and requested a plant overview. The facility was asked to describe the Hydrotreating/ThioSolv process, emergency response procedures and maintenance practices.

EPA requested a walk-through of the facility. Hydrogen, ammonia, and sulfur dioxide are stored in pressure vessels along the eastern edge of the property. EPA examined these horizontal pressure vessels, their piping and the truck unloading areas. The three chemicals are conveyed from the storage vessels to the processing units via a pipe rack. The hydrogen tank (30,000 gallons) is owned, operated and maintained by Air Products. Gladieux personnel conduct routine shift monitoring for this vessel. The hydrotreater has the capability of receiving hydrogen from a portable tank truck in the event of malfunction or shutdown of the storage tank.

Th anhydrous ammonia (9,700 gallon) and sulfur dioxide (6,000 gallon) tanks are owned, operated and maintained by Gladieux personnel. The anhydrous ammonia tank was brought to the site when the facility was constructed in 2016 and, according to its ASME tag, the tank was manufactured in 1984. The sulfur dioxide tank, according to its ASME tag, was manufactured in 2016. A bank of nitrogen gas cylinders, connected with a regulator and flexible hose, [Photo 16] provide pressure to the SO2 tank. At the time of the inspection, both the hydrotreating process and the ammonium thiosulfate process were shut down for maintenance. The nitrogen tanks were not connected to the SO2 tank at the time of inspection.

EPA next walked along the pipe rack and examined the hydrotreater and ThioSolv unit. The hydrotreater operates with an excess of hydrogen. This converts as much of sulfur compounds to hydrogen sulfide as possible. Excess hydrogen is vented to the flare as needed. In the ThioSolv process, ammonia, sulfur dioxide, and hydrogen sulfide (from the desulfurization process) react in an aqueous solution to produce the ammonium thiosulfate. The unit operates in the presence of un-ionized ammonia. An excess of SO2 provides buffering. The process take place in

two reactor vessels, which operate under pressure.

EPA inspected the spare parts storage area with Mr. Marqueling. The vendor maintains the hydrogen tank. Gladieux personnel maintain the anhydrous ammonia and sulfur dioxide storage vessels as well as the hydrotreater and ThioSolv equipment. The company reports that the spare parts inventory is limited since most critical equipment is redundant and parts needed can be ordered with a relatively quick turnaround. The company relies on the manufacturer to provide parts made of the requested material and visually inspects them. No Positive Material Identification system is used to verify the parts are made of the requested material.

SCBA stored in the control room were inspected by EPA. These are used for maintenance and operational activities.

EPA examined the 24 bullets used for the low molecular weight hydrocarbons. All bullets were in use at the time of the inspection and full of product.

Review of Risk Management Program

Management (68.15)

Tim Wagner is responsible for the overall RMP Program and serves as the emergency contact. The facility's Management System documentation is not specific about assignment of responsibilities for individual elements of the RMP although during the inspection. Facility personnel could readily define their individual responsibilities. For example, Mr. Marqueling has Mechanical Integrity, Tim Wagner has Management of Change, and Mr. Hayes has Emergency Response, but the required documentation of these role wasn't provided.

Hazard Assessment (68.20-68.39)

The facility reported worst-case scenarios (WCS) for sulfur dioxide (toxic) and hydrogen (flammable). Alternate release scenarios (ARS) were provided for sulfur dioxide, anhydrous ammonia and hydrogen. Documentation for how the facility arrived at the numbers reported in the RMP was provided for review, including the calculation of the distance to endpoint for the WCS and the parameters used for that calculation. A description of scenarios identified for the ARS, including the assumptions and parameters used, was available. The facility used RMP*Comp for the WCS and ARS calculations. The number of nearby residents possibly affected by a catastrophic release was calculated based on a circle with a radius equal to the distance to endpoint calculated by the facility using 2010 census data for both the WCS and the ARS, as required by the regulations. No environmental receptors were identified. The documentation on environmental receptors was not available at the time of inspection.

Five Year Accident History (68.42)

The facility reports it has not experienced any accidents involving RMP-listed chemical since startup in the third quarter of 2017.

Process Safety Information (PSI)(68.65)

The RMP regulation requires this facility to compile and maintain up-to-date safety information related to the regulated substance, process, and equipment. This is known as Process Safety Information (PSI). This information includes process flow diagrams, the maximum intended inventory, safe operating limits, and consequences of deviation from these safe operating limits. PSI requirements also include: piping and instrumentation drawings (P&ID's); information about the materials of construction, electrical classification, relief systems, and safety systems; the equipment standards; the material and energy balances for the process; and the codes and standards used to operate the process. The facility is also required to document it is designed in compliance with recognized and generally accepted good engineering practices.

The facility provided the company's "Process Safety Information General Outline" and documentation for the regulated substance, process data and records of equipment codes and standards. The Outline is incomplete and appendices (e.g. equipment list) for this policy/procedure are referenced but contain no plant information.

The following additional concerns were identified: (a) The block flow diagram for the facility does not match the equipment in the field or the P&ID's. Also it doesn't define which equipment is subject to RMP; (b) Safe Upper and Lower Limits are not defined for pieces of equipment subject to RMP (e.g., storage vessels); (c) Consequences of Deviation from the safe limits are not defined and the safe upper and lower limits are not available; (d) The PSI states that portions of the plant must meet the NFPA electrical codes 70 and 497A, but areas of the facility subject to the different electrical classifications are not defined; (e) Relief system design and design basis was not available at the time of the inspection; (f) The material balance for the ThioSolv portion of the process is missing key information and not suitable for determining which equipment is subject to RMP or for evaluation in the PHA and did not contain any energy balance information; (h) The P&ID's are not as-built drawings and do not match the field; (i) Operating limits and safety systems are reported by the facility to be in the Operating Procedures but the procedures that did exist do not contain this information.

In examining the P&IDs against the existing equipment, EPA found the block valves located between the SO2 and NH3 storage vessels and their PSVs are not in the drawings. The drawings indicate that rupture discs are used in these locations, not block valves (see PHA discussion below). Block valves located between the vessel and the PSV valves are usually not permitted by RAGAGEP.

Process Hazard Analysis (PHA) (68.67)
This facility is required to conduct a PHA for the regulated substances, processes, and procedures, then revalidate it every 5 years. Since this is a new process, the PHA is required prior to start of construction for the regulated processes. Tim Wagner is responsible for the PHA process and provided separate preconstruction PHAs for the Hydrotreater section and the ThioSolv section.

A Hydrotreater preconstruction PHA was completed in July 2016 using the HAZOP method. The HAZOP identified 91 action items which were risk ranked and assigned due dates. Forty-eight (48) action items were assigned to the contractor and closed. These related to design changes, verification of equipment specs such as PSV sizing, and software modifications. Forty-four (44) of these action items had not been completed at the time of the EPA inspection including 18 related to SOPs and 6 related to interlocks and alarms. The facility has also ranked these recommendations according to risk based on the severity and likelihood of an event (very high, high, medium and low). Of the 44 uncompleted action items, 5 were ranked by the facility as very high risk, 4 were ranked high risk, and 9 were unranked.

While the Tracking Report for this PHA provided to EPA has a field for "Responsibility," no member of the Gladieux staff is identified in this field. Of the 44 uncompleted action items each has an "End Date" assigned to them in the tracking report between late 2016 and early 2017, which were past due at the time of the inspection.

The HAZOP for the ThioSolv process, performed in 2015, identified 39 action items which were risk ranked. The facility did not provide documentation as to whether and how these action items were assigned or addressed. The EPA inspection identified some actions that had been completed (e.g. safety shower installation adjacent to the storage tanks) and some that had not (e.g., recommended SOPs). The Tracking Report for the action items from the recommendation of this PHA also has a field for "Responsibility" that doesn't identify any specific staff member. This tracking report has the "End Date" field, but it is blank for each item.

Operating Procedures (68.69)
The Gladieux facility is required to have written standard operating procedures accessible to operators which provide instructions for conducting activities within the covered process. The operating procedures must be site-specific and reviewed annually. The procedures must include safe operating limits and consequences of deviation. Health and safety considerations for operator activities must be included along with the function, limits and operator interactions for safety system (e.g., interlocks).

The facility's operating procedures are incomplete and do not include the following: normal operation for many activities, start-up of the process following turnaround or emergency shutdown, and shutdown for emergency or normal operation. For new processes, the Operating Procedures must be available to operators at start-up and all actions from the preconstruction PHA must be closed. Both the Hydrotreater and ThioSolv HAZOP identified a significant number of SOP action items and the facility did not provide documentation that these were addressed. Examples of missing operating instructions include: (a) instructions for operators on their job duties related to interlocks including by-passing and disabling them, (b) procedures for equipment draining, (c) sampling hazardous streams, (d) PPE requirements for equipment that may contain significant concentrations of hydrogen sulfide, and (e) requirements for regularly scheduled operator tours. The operating procedures that did exist didn't provide operators with the information they require on safe operating limits or the consequences of deviation from these limits.

Training (68.71)
The facility is required to train operators on how to operate the facility using the written operating procedures. Documentation is also required for how each operator is trained, including the date, what was covered, and how the training is evaluated and understood.

At the time of the inspection, Gladieux provided no training documentation for operators related to startup of the unit or training on operating procedures.

Mechanical Integrity (68.73)
The RMP regulations require written maintenance procedures and training for personnel who maintain a covered process. The regulations also require a system for inspections and preventative maintenance (PM) for critical equipment and documentation that the inspections and PM are performed. Equipment inspection and testing must be performed in accordance with good engineering practices.

At the time of the inspection Gladieux was not able to provide a written mechanical integrity program. EPA asked to review the facility's Mechanical Integrity records. Mr. Marqueling provided most of this information. Gladieux maintains an Excel spreadsheet that identifies preventative maintenance (PM) to be conducted weekly, bi-weekly and monthly. No PM elements have been defined for the ammonia or sulfur dioxide tanks. Gladiuex stated that the PM for the hydrogen tank is the responsibility of the vendor. Because the Gladieux covered process is new, many inspection, testing and PM elements included in codes and good engineering practices are not required in the first year of operation (e.g. tank inspections). Gladieux has not developed a schedule for these elements.

The facility has no written maintenance procedures or documentation of the training for its maintenance personnel.

Management of Change(MOC) (68.75)
This Program 3 facility is required to develop a policy to manage changes to the process and to implement the MOC program. Gladieux provided its combined MOC and PSSR procedure (MOC policy) for EPA review dated August 30, 2016. The procedure defines the type of changes subject to MOC and the process used for the review. EPA found one concern with the MOC policy. On page 4, the definition of replacement-in-kind (RIK) includes an example of the replacement of an LEL detector, stating, "with a new detector of similar design/functionality." According to 40 C.F.R. Part 68.3, changes are only considered RIK if the replacement meets the same design specifications. Replacement of parts with similar functionality, but not the same specifications, are not RIK and would require an MOC as a minor or major change.

Gladieux reported that each of the changes completed following start-up have been a replacement-in-kind (RIK) and therefore not subject to the MOC process. As such, the facility has not used the MOC policy and could not provide completed forms for EPA review since startup. On page 5 the MOC policy requires an originator to fill out Section 1, 2, 3 and 4 for any change that is classified as a RIK. The representatives of Gladieux stated that they had not filled out an MOC for the RIK changes at the facility.

Prior to startup Gladieux filled out an MOC form. The form was dated August 7, 2017 for changes to the process design prior to startup. The MOC included 8 changes. One of these addressed a HAZOP recommendation, 5 were for cost reductions, and 2 were required by detailed engineering for the project. Drawing mark-ups are included in the documentation. The 8 changes appear to have been reviewed all together. The MOC review identified 4 action items related to operating procedures (not completed) and bump guards. The MOC is not specific about what was reviewed, including the safety elements considered.

The August 7, 2017 MOC raises several concerns as it does not follow the facility's MOC policy. This MOC is classified as a minor change. The reason for the change in Section 2a is very brief. Section 2b asks the facility to describe the change in detail which is also very brief. These brief descriptions don't provide the level of detail needed for the "technical basis for the change" for the individual doing the safety review to adequately review these changes for safety. For example: two of the changes are to remove the rupture disks from the lines feeding the pressure relief valves (PSVs) at the SO2 tank and also to replace the three-way valve with two block valves. Rupture disks are often put in place to protect the PSVs from acid attack and degradation to failure. No explanation as to why these were now unnecessary was given. Replacing three-way valves with block valves generally goes against good engineering practices because closing both valves can leave the pressurized tank without overpressure protection. The change does specify that the block valves will be "CSC/CSO" or car sealed closed and car sealed open. The reason documented in the MOC for the change is "cost reduction."

In Section 6 "Minor Change – Safety & Health Review" the block valve issue is not specifically addressed including in question 6.6 "Change/modification impacts an existing relief system…" which is marked as "N/A" - Not Applicable. It would be expected that, at a minimum, there would be a change in the facility's inspection program for all of its car-sealed valves to ensure that the new valves are include in the program. Section 6 also contains the question 6.21 which states "Does the change/modification present increased process safety risk to the community?" which is marked "N/A" and not "No" or "Yes".

On page 7 of the policy, "minor and major changes shall be reviewed and approved by the President, Gladieux Processing. Section 8 of the MOC is used to document final approvals." Section 8 is included in the MOC, but it doesn't contain the approval of the President or anyone else.

Some obvious considerations for these changes are missing. (1) Replacement of the rupture discs with valves below the PSVs on the sulfur dioxide tank would typically require evaluation of the consequences of leaving both valves closed. This is not addressed in the MOC as required by 40 CFR §68.75(b)(3) related to operating procedures. (2) The change in PSV piping from 4 inches to 3 inches would typically require revised relief calculations. Relief calculations are not included in the packet as would be required by 40 CFR §68.75(b)(2) related to the impact of the change on safety. (3) A cost reduction to change from stainless to carbon steel would, at a minimum, require revision to the PSI information. This was not identified in the MOC as required by 40 CFR §68.75(b)(1) related to technical basis for the change.

Pre-Startup Safety Review (PSSR) (68.77)

Prior to start-up or after a significant change to the process, the facility must conduct a review to verify that the work was properly completed and did not create additional risks. This review must include an evaluation of whether the equipment and construction met design specifications, the adequacy of safety, operating, maintenance and emergency procedures, whether recommendations in the PHAs were addressed before startup, where changes were made to the original design that they were subject to the MOC process and action items closed, and that training was conducted for employees operating the process.

As discussed above, Gladieux has a combined MOC and PSSR procedure. The PSSR form does not address some required PSSR elements including closure of PHA or MOC action items prior to startup. EPA requested the PSSR

for startup of the hydrotreater and ThioSolv process. Gladieux provided a completed PSSR checklist identifying each P&ID. No deficiencies or action items were identified in the PSSR for startup of the process. One individual, Tim Wagner, President, completed all PSSR elements and there is no documentation that a field review was conducted for the construction elements. The PSSR forms fail to document if safety, operating and emergency procedure are in place. The procedure fails to document if the PHA has been performed and that all of the recommendations have been resolved prior to startup. At the time of inspection, the PHA performed prior to startup included recommendations and, as noted in the PHA section of this report, many of the recommendations had not been resolved. The RMP regulations also require the PSSR, prior to starting a new process, ensures that the facility "meets the requirements contained in the Management of Change, §68.75." The PSSR used by Gladieux fails to document the MOC program is being followed or has been used for all the changes to this process.

Compliance Audits (68.79)
Once every three years, Gladieux must examine its Risk Management Program to determine if this Program 3 process is compliance with the RMP regulations. Since this Program started in May 2017, the first audit done to show compliance with the RMP regulations will need to be done prior to May 2020. The facility had not performed an audit prior to the time of the inspection.

Incident Investigations (68.81)
The facility is required in investigate incidents in the covered process that have or could have resulted in a catastrophic release. Process startups at this type of facility can sometime result in events that could have escalated into an uncontrolled release but through the proper training and experience are prevented. These types of events are defined as incidents at 40 C.F.R. Part 68.3 and are also required to go through the incident investigation process.

Gladieux reports that since the RMP chemicals were brought on site and through the October 2017 process startup, that no events have occurred that have resulted in a catastrophic release of RMP chemicals. The facility also reported to EPA that there have been no events that, either with or without manual intervention, could have resulted in an uncontrolled release of RMP chemicals. At the time of inspection there were no incident investigations to review.

Employee Participation (68.83)
Facilities subject to Program 3 are required to develop a policy to include employees who work with the process in various elements of the RMP program. These include the development of the process safety program, participation in the PHA and in the required audit. Although the review of the employee participation program was minimal, EPA identified no issues of concern with the Gladieux Employee Participation program.

Hot Work (68.85)
The Gladieux facility is required to develop and implement a program to manage the hot work done at the facility. The hot work permit program is required to document hot work in areas the pose a risk to process safety. This policy needs to include the fire prevention and protection requirements found at 29 C.F.R. 1910.252(a).

The facility provided a description of the Hot Work permit requirements and the duties of fire watches. EPA examined several Hot Work Permits that had been used and closed. The Gladieux personnel didn't seem to understand the fire watch requirement in their permit program. As required by their program and 29 C.F.R. 1901.252(a) a fire watch is required to remain at the location of the hot work for at least 30 minutes after the completion of hot work. Mr. Wagner and the other personnel at the inspection seemed to feel it was okay for the fire watch to leave the area and return some time later to see if anything had caught on fire while they were away.

Contractors (68.87)
Program 3 RMP facilities are required to develop a program to manage contractors working on or near the covered process. The regulations require that contractors be vetted for safety performance, informed of chemical hazards, know what to do in the event of an emergency, only have access to areas necessary for the work being performed,

and that contractor performance is overseen. Gladieux does not have a Contractor program. The company reports that no contractors have worked in the covered process since startup but reported that DuPont and ThioSolv have been to the site and made changes since startup. While the facility may not see these partners as contractors, they would fall within the definition for the purposes of this program. Also, since RMP chemicals were on site prior to the startup of the process and these contractors were onsite during the startup, EPA is concerned that they were not operating within the bounds of an adequate contractor program when the first RMP chemical was on site above threshold quantities.

Emergency Response (68.90-68.95)
Gladieux is not a first responder facility. The facility reports that all site employees receive 24-hour HAZWOPER training and SCBA's are maintained in the control room, maintenance building and basement area for operation and maintenance use. The EPA inspector reviewed the facility Emergency Action Plan and the equipment onsite. Gladieux reports that the facility has worked with the Fire Department and LEPC to inform them of the new hazards resulting from addition of the Hydrotreater/ThioSolv process. Earlier in 2018, the facility conducted a large drill for a sulfur dioxide release with the LEPC and 18 other responding agencies and service providers. There are no issues of concern identified in Gladieux's emergency response.

Review of Risk Management Plan
The facility submitted a Risk Management Plan (RMP) in May 2017 prior to startup of the new Hydrotreater/ThioSolv process. The Plan matches the conditions reviewed at the facility by the EPA inspectors for this process.

Additional Concerns
Based upon the information provided, Gladieux has not evaluated another possible RMP process operating at the facility for many years. As reported in the process description, the company separates low molecular hydrocarbons and stores them as a mixture in 24 interconnected bullet pressure vessels approximately 25,000 gallons in size. The company uses these bullets in the summer months to store the lighter ends of their product, because summer gasoline blends are not allowed to contain them. At the time of the inspection all of the bullets were full. The product in these bullet is reintegrated into the process when winter blends allow them to be used. Tim Wagner reported these hydrocarbons are propane, butane, pentane and their isomers. The flash and boiling points for these chemicals identified individually are NFPA-4 and a combination of these chemicals would very likely also be NFPA-4 rated. A process, such as storage, containing flammable chemicals that are NFPA-4 rated and that exceeds the 10,000 pound threshold is required to have an RMP and a Risk Management Program. Tim Wagner stated that these bullets were not included in the RMP program for the Hydrotreater/Thiosolv process.

Tim Wagner provided EPA with the contact information for a chemical engineer for the facility at the time of the inspection, Rasik Raval at (260)-423-4477 x 241. EPA spoke with Mr. Raval shortly after the inspection. He stated that the facility had not characterized the chemicals stored in the bullets. The company reports that it has not evaluated this process for hazards. Mr. Ravel reported to EPA in the phone conversation that the company believes the fuel exemption applies to this storage/process. EPA is concerned because propane, the butane and butene isomers and the pentane and pentene isomers are all RMP chemicals. Further, since there are 24 interconnected bullets they exceed the 10,000-lb. threshold quantity. Since these chemicals are not used as a fuel and they don't meet the definition of naturally occuring hydrocarbons, there is no reason to think the storage process is exempt. These bullets are at least subject to the General Duty Clause which would impose certain hazard management standards. EPA's inspection of the bullets [Photos 27 through 30] raised questions about basic design of the repurposed equipment used for this storage and certain safety elements including relief sizing, vessel integrity, and safe operating limits.

Closing Conference
Greg Chomycia provided the closing conference with Alice Boomhower. The Gladieux personnel present were Tim

Wagner, Josh Wagner, Bob Hayes and Thomas Black. Additional documents required to complete EPA's inspection were requested. This additional documentation was provided and evaluated as part of this report.

Names(s) and Signature(s) of Inspector(s) Greg Chomycia Alice Boomhower	Agency/Office/Telephone Number US EPA/CEPPS/312-353-8217 US EPA/CEPPS/312-353-1612	Date 3/11/19 03/26/2019
Name(s) and Signature(s) of Reviewer(s) Michael E. Hans	Agency/Office USEPA/CEPPS, Chief CEPPS	Date 3-26-19

RMP Inspection Checklist	Facility Name: Gladieux Processing LLC EPA Facility ID: 1000 0023 1705

Section A – Management [68.15]

Management system developed and implemented as provided in 40 CFR 68.15? Comments:	☐S	☐M	☐U	☐N/A

Has the owner or operator:

1. Developed a management system to oversee the implementation of the risk management program elements? [68.15(a)]	☐Y	☒N	☐N/A	
2. Assigned a qualified person or position that has the overall responsibility for the development, implementation, and integration of the risk management program elements? [68.15(b)]	☒Y	☐N	☐N/A	
3. Documented other persons responsible for implementing individual requirements of the risk management program and defined the lines of authority through an organization chart or similar document? [68.15(c)]	☐Y	☒N	☐N/A	

Section B: Hazard Assessment [68.20-68.42]

Hazard assessment conducted and documented as provided in 40 CFR 68.20-68.42? Comments:	☐S	☐M	☐U	☐N/A

Hazard Assessment: Offsite consequence analysis parameters [68.22]

1. Used the following endpoints for offsite consequence analysis for a worst-case scenario: [68.22(a)]	☒Y	☐N	☐N/A
☒ For toxics: the endpoints provided in Appendix A of 40 CFR Part 68? [68.22(a)(1)]			
☒ For flammables: an explosion resulting in an overpressure of 1 psi? [68.22(a)(2)(i)]; or			
☐ For flammables: a fire resulting in a radiant heat/exposure of 5 kw/m^2 for 40 seconds? [68.22(a)(2)(ii)]			
☐ For flammables: a concentration resulting in a lower flammability limit, as provided in NFPA documents or other generally recognized sources? [68.22(a)(2)(iii)]			
2. Used the following endpoints for offsite consequence analysis for an alternative release scenario: [68.22(a)]	☒Y	☐N	☐N/A
☒ For toxics: the endpoints provided in Appendix A of 40 CFR Part 68? [68.22(a)(1)]			
☒ For flammables: an explosion resulting in an overpressure of 1 psi? [68.22(a)(2)(i)]			
☐ For flammables: a fire resulting in a radiant heat/exposure of 5 kw/m^2 for 40 seconds? [68.22(a)(2)(ii)]			
☐ For flammables: a concentration resulting in a lower flammability limit, as provided in NFPA documents or other generally recognized sources? [68.22(a)(2)(iii)]			
3. Used appropriate wind speeds and stability classes for the release analysis? [68.22(b)]	☒Y	☐N	☐N/A
4. Used appropriate ambient temperature and humidity values for the release analysis? [68.22(c)]	☒Y	☐N	☐N/A
5. Used appropriate values for the height of the release for the release analysis? [68.22(d)]	☒Y	☐N	☐N/A
6. Used appropriate surface roughness values for the release analysis? [68.22(e)]	☒Y	☐N	☐N/A
7. Do tables and models, used for dispersion analysis of toxic substances, appropriately account for dense or neutrally buoyant gases? [68.22(f)]	☒Y	☐N	☐N/A
8. Were liquids, other than gases liquefied by refrigeration only, considered to be released at the highest daily maximum temperature, based on data for the previous three years appropriate for a stationary source, or at process temperature, whichever is higher? [68.22(g)]	☐Y	☐N	☒N/A

Hazard Assessment: Worst-case release scenario analysis [68.25]

9.	Analyzed and reported in the RMP one worst-case release scenario estimated to create the greatest distance to an endpoint resulting from an accidental release of a regulated toxic substance from covered processes under worst-case conditions? [68.25(a)(2)(i)]	☒Y	☐N ☐N/A
10.	Analyzed and reported in the RMP one worst-case release scenario estimated to create the greatest distance to an endpoint resulting from an accidental release of a regulated flammable substance from covered processes under worst-case conditions? [68.25(a)(2)(ii)]	☒Y	☐N ☐N/A
11.	Analyzed and reported in the RMP additional worst-case release scenarios for a hazard class if the worst-case release from another covered process at the stationary source potentially affects public receptors different from those potentially affected by the worst-case release scenario developed under 68.25(a)(2)(i) or 68.25(a)(2)(ii)? [68.25(a)(2)(iii)]	☐Y	☐N ☒N/A
12.	Has the owner or operator determined the worst-case release quantity to be the greater of the following: [68.25(b)] ☒ If released from a vessel, the greatest amount held in a single vessel, taking into account administrative controls that limit the maximum quantity? [68.25(b)(1)] ☐ If released from a pipe, the greatest amount held in the pipe, taking into account administrative controls that limit the maximum quantity? [68.25(b)(2)]	☒Y	☐N ☐N/A
13.a.	Has the owner or operator for toxic substances that are normally gases at ambient temperature and handled as a gas or liquid under pressure:		
13.a.(1)	Assumed the whole quantity in the vessel or pipe would be released as a gas over 10 minutes? [68.25(c)(1)]	☒Y	☐N ☐N/A
13.a.(2)	Assumed the release rate to be the total quantity divided by 10, if there are no passive mitigation systems in place? [68.25(c)(1)]	☒Y	☐N ☐N/A
13.b.	Has the owner or operator for toxic gases handled as refrigerated liquids at ambient pressure:		
13.b.(1)	Assumed the substance would be released as a gas in 10 minutes, if not contained by passive mitigation systems or if the contained pool would have a depth of 1 cm or less? [68.25(c)(2)(i)]	☐Y	☐N ☒N/A
13.b.(2)	If released substance would be contained by passive mitigation systems in a pool with a depth > 1 cm; ☐ Assumed the quantity in the vessel or pipe (as determined per 68.25(b)) would be spilled instantaneously to form a liquid pool? [68.25(c)(2)(ii)] ☐ Calculated the volatility rate at the boiling point of the substance and at the conditions specified in 68.25(d)? [68.25(c)(2)(ii)]	☐Y	☐N ☒N/A
13.c.	Has the owner or operator for toxic substances that are normally liquids at ambient temperature:		
13.c.(1)	Assumed the quantity in the vessel or pipe would be spilled instantaneously to form a liquid pool? [68.25(d)(1)]	☐Y	☐N ☒N/A
13.c.(2)	Determined the surface area of the pool by assuming that the liquid spreads to 1 cm deep, if there is no passive mitigation system in place that would serve to contain the spill and limit the surface area, or if passive mitigation is in place, was the surface area of the contained liquid used to calculate the volatilization rate? [68.25(d)(1)(i)]	☐Y	☐N ☒N/A
13.c.(3)	Taken into account the actual surface characteristics, if the release would occur onto a surface that is not paved or smooth? [68.25(d)(1)(ii)]	☐Y	☐N ☒N/A

13.c.(4)	Determined the volatilization rate by accounting for the highest daily maximum temperature in the past three years, the temperature of the substance in the vessel, and the concentration of the substance if the liquid spilled is a mixture or solution? [68.25(d)(2)]	☐Y	☐N	☒N/A
13.c.(5)	Determined the rate of release to air from the volatilization rate of the liquid pool? [68.25(d)(3)]	☐Y	☐N	☒N/A
13.c.(6)	Determined the rate of release to air by using the methodology in the RMP Offsite Consequence Analysis Guidance, any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices, or proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request? [68.25(d)(3)] What modeling technique did the owner or operator use? [68.25(g)] _____	☐Y	☐N	☒N/A
13.d.	Has the owner or operator for flammables:			
13.d.(1)	Assumed the quantity in a vessel(s) of flammable gas held as a gas or liquid under pressure or refrigerated gas released to an undiked area vaporizes resulting in a vapor cloud explosion? [68.25(e)]	☒Y	☐N	☐N/A
13.d.(2)	For refrigerated gas released to a contained area or liquids released below their atmospheric boiling point, assumed the quantity volatilized in 10 minutes results in a vapor cloud? [68.25(f)]	☐Y	☐N	☒N/A
13.d.(3)	Assumed a yield factor of 10% of the available energy is released in the explosion for determining the distance to the explosion endpoint, if the model used is based on TNT-equivalent methods? [68.25(e)]	☐Y	☐N	☒N/A
14.	Used the parameters defined in 68.22 to determine distance to the endpoints? [68.25(g)]	☒Y	☐N	☐N/A
15.	Determined the rate of release to air by using the methodology in the RMP Offsite Consequence Analysis Guidance, any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices, or proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request? [68.25(g)] What modeling technique did the owner or operator use? [68.25(g)] ___RMP Comp____	☒Y	☐N	☐N/A
16.	Ensured that the passive mitigation system, if considered, is capable of withstanding the release event triggering the scenario and will still function as intended? [68.25(h)]	☐Y	☐N	☒N/A
17.	Considered also the following factors in selecting the worst-case release scenarios: [68.25(i)] ☐ Smaller quantities handled at higher process temperature or pressure? [68.25(i)(1)] ☐ Proximity to the boundary of the stationary source? [68.25(i)(2)]	☐Y	☐N	☒N/A
Hazard Assessment: Alternative release scenario analysis [68.28]				
18.	Identified and analyzed at least one alternative release scenario for each regulated toxic substance held in a covered process(es) and at least one alternative release scenario to represent all flammable substances held in covered processes? [68.28(a)]	☒Y	☐N	☐N/A
19.	Selected a scenario: [68.28(b)] ☒ That is more likely to occur than the worst-case release scenario under 68.25? [68.28(b)(1)(i)] ☒ That will reach an endpoint off-site, unless no such scenario exists? [68.28(b)(1)(ii)]	☒Y	☐N	☐N/A

20. Considered release scenarios which included, but are not limited to, the following: [68.28(b)(2)] ☒ Transfer hose releases due to splits or sudden hose uncoupling? [68.28(b)(2)(i)] ☒ Process piping releases from failures at flanges, joints, welds, valves and valve seals, and drains or bleeds? [68.28(b)(2)(ii)] ☐ Process vessel or pump releases due to cracks, seal failure, or drain, bleed, or plug failure? [68.28(b)(2)(iii)] ☐ Vessel overfilling and spill, or overpressurization and venting through relief valves or rupture disks? [68.28(b)(2)(iv)] ☐ Shipping container mishandling and breakage or puncturing leading to a spill? [68.28(b)(2)(v)]	☒Y ☐N ☐N/A
21. Used the parameters defined in 68.22 to determine distance to the endpoints? [68.28(c)]	☒Y ☐N ☐N/A
22. Determined the rate of release to air by using the methodology in the RMP Offsite Consequence Analysis Guidance, any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices, or proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request? [68.28(c)] What modeling technique did the owner or operator use? [68.25(g)] **RMP Comp**	☒Y ☐N ☐N/A
23. Ensured that the passive and active mitigation systems, if considered, are capable of withstanding the release event triggering the scenario and will be functional? [68.28(d)]	☐Y ☐N ☒N/A
24. Considered the following factors in selecting the alternative release scenarios: [68.28(e)] ☐ The five-year accident history provided in 68.42? [68.28(e)(1)] ☒ Failure scenarios identified under 68.50? [68.28(e)(2)]	☒Y ☐N ☐N/A
Hazard Assessment: Defining off-site impacts–Population [68.30]	
25. Estimated population that would be included in the distance to the endpoint in the RMP based on a circle with the point of release at the center? [68.30(a)]	☒Y ☐N ☐N/A
26. Identified the presence of institutions, parks and recreational areas, major commercial, office, and industrial buildings in the RMP? [68.30(b)]	☒Y ☐N ☐N/A
27. Used most recent Census data, or other updated information to estimate the population? [68.30(c)]	☒Y ☐N ☐N/A
28. Estimated the population to two significant digits? [68.30(d)]	☒Y ☐N ☐N/A
Hazard Assessment: Defining off-site impacts–Environment [68.33]	
29. Identified environmental receptors that would be included in the distance to the endpoint based on a circle with the point of release at the center? [68.33(a)]	☒Y ☐N ☐N/A
30. Relied on information provided on local U.S.G.S. maps, or on any data source containing U.S.G.S. data to identify environmental receptors? [Source may have used LandView to obtain information] [68.33(b)]	☒Y ☐N ☐N/A No environmental data
Hazard Assessment: Review and update [68.36]	
31. Reviewed and updated the off-site consequence analyses at least once every five years? [68.36(a)]	☐Y ☐N ☒N/A

32. Completed a revised analysis and submit a revised RMP within six months of a change in processes, quantities stored or handled, or any other aspect that might reasonably be expected to increase or decrease the distance to the endpoint by a factor of two or more? [68.36(b)]	☐Y ☐N ☒N/A
Hazard Assessment: Documentation [68.39]	
33. For worst-case scenarios: a description of the vessel or pipeline and substance selected, assumptions and parameters used, the rationale for selection, and anticipated effect of the administrative controls and passive mitigation on the release quantity and rate? [68.39(a)]	☒Y ☐N ☐N/A
34. For alternative release scenarios: a description of the scenarios identified, assumptions and parameters used, the rationale for the selection of specific scenarios, and anticipated effect of the administrative controls and mitigation on the release quantity and rate? [68.39(b)]	☒Y ☐N ☐N/A
35. Documentation of estimated quantity released, release rate, and duration of release? [68.39(c)]	☒Y ☐N ☐N/A
36. Methodology used to determine distance to endpoints? [68.39(d)]	☒Y ☐N ☐N/A
37. Data used to estimate population and environmental receptors potentially affected? [68.39(e)]	☒Y ☐N ☐N/A No environmental data
Hazard Assessment: Five-year accident history [68.42]	
38. Has the owner or operator included all accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage? [68.42(a)]	☐Y ☐N ☒N/A
39. Has the owner or operator reported the following information for each accidental release: [68.42(b)] ☐ Date, time, and approximate duration of the release? [68.42(b)(1)] ☐ Chemical(s) released? [68.42(b)(2)] ☐ Estimated quantity released in pounds and percentage weight in a mixture (toxics)? [68.42(b)(3)] ☐ NAICS code for the process? [68.42(b)(4)] ☐ The type of release event and its source? [68.42(b)(5)] ☐ Weather conditions (if known)? [68.42(b)(6)] ☐ On-site impacts? [68.42(b)(7)] ☐ Known offsite impacts? [68.42(b)(8)] ☐ Initiating event and contributing factors (if known)? [68.42(b)(9)] ☐ Whether offsite responders were notified (if known)? [68.42(b)(10)] ☐ Operational or process changes that resulted from investigation of the release? [68.42(b)(11)]	☐Y ☐N ☒N/A

Section C: Prevention Program

Implemented the Program 3 prevention requirements as provided in 40 CFR 68.65 - 68.87? ☐S ☐M ☐U ☐N/A
Comments:

RMP Inspection Checklist	Facility Name: Gladieux Processing LLC EPA Facility ID: 1000 0023 1705

Prevention Program- Safety information [68.65]

1. Has the owner or operator compiled written process safety information, which includes information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process, before conducting any process hazard analysis required by the rule? [68.65(a)] Does the process safety information contain the following for hazards of the substances: [68.65(b)] ☒ Material Safety Data Sheets (MSDS) that meet the requirements of the OSHA Hazard Communication Standard [29 CFR 1910.1200(g)]? [68.48(a)(1)] ☒ Toxicity information? [68.65(b)(1)] ☒ Permissible exposure limits? [68.65(b)(2)] ☒ Physical data? [68.65(b)(3)] ☒ Reactivity data? [68.65(b)(4)] ☒ Corrosivity data? [68.65(b)(5)] ☒ Thermal and chemical stability data? [68.65(b)(6)] ☒ Hazardous effects of inadvertent mixing of materials that could foreseeably occur? [68.65(b)(7)]	☒Y ☐N ☐N/A
2. Has the owner documented information pertaining to technology of the process? ☐ A block flow diagram or simplified process flow diagram? [68.65(c)(1)(i)] **Block flow diagram does not match the current process** ☒ Process chemistry? [68.65(c)(1)(ii)] ☒ Maximum intended inventory? [68.65(c)(1)(iii)] ☐ Safe upper and lower limits for such items as temperatures, pressures, flows, or compositions? [68.65(c)(1)(iv)] ☐ An evaluation of the consequences of deviation? [68.65(c)(1)(iv)]	☐Y ☒N ☐N/A
3. Does the process safety information contain the following for the equipment in the process: [68.65(d)(1)] ☒ Materials of construction? 68.65(d)(1)(i)] ☐ Piping and instrumentation diagrams [68.65(d)(1)(ii)] **P&IDs don't match actual equipment** ☐ Electrical classification? [68.65(d)(1)(iii)] ☐ Relief system design and design basis? [68.65(d)(1)(iv)] N/A Ventilation system design? [68.65(d)(1)(v)] ☐ Design codes and standards employed? [68.65(d)(1)(vi)] ☐ Material and energy balances for processes built after June 21, 1999? [68.65(d)(1)(vii)] ☐ Safety systems? [68.65(d)(1)(viii)]	☐Y ☒N ☐N/A
4. Has the owner or operator documented that equipment complies with recognized and generally accepted good engineering practices? [68.65(d)(2)]	☒Y ☐N ☐N/A
5. Has the owner or operator determined and documented that existing equipment, designed and constructed in accordance with codes, standards, or practices that are no longer in general use, is designed, maintained, inspected, tested, and operating in a safe manner? [68.65(d)(3)]	☐Y ☐N ☒N/A

Prevention Program- Process Hazard Analysis [68.67]	
6. Has the owner or operator performed an initial process hazard analysis (PHA), and has this analysis identified, evaluated, and controlled the hazards involved in the process? [68.67(a)]	☒Y ☐N ☐N/A
7. Has the owner or operator determined and documented the priority order for conducting PHAs, and was it based on an appropriate rationale? [68.67(a)]	☐Y ☐N ☒N/A
8. Has the owner used one or more of the following technologies to conduct process PHA: [68.67(b)] ☐ What-if? [68.67(b)(1)] ☐ Checklist? [68.67(b)(2)] ☐ What-if/Checklist? [68.67(b)(3)] ☒ Hazard and Operability Study (HAZOP) [68.67(b)(4)] ☐ Failure Mode and Effects Analysis (FMEA) [68.67(b)(5)] ☐ Fault Tree Analysis? [68.67(b)(6)] ☐ An appropriate equivalent methodology? [68.67(b)(7)]	☒Y ☐N ☐N/A
9. Did the PHA address: ☒ The hazards of the process? [68.67(c)(1)] ☒ Identification of any incident that had a likely potential for catastrophic consequences? [68.67(c)(2)] ☒ Engineering and administrative controls applicable to hazards and interrelationships?[68.67(c)(3)] ☒ Consequences of failure of engineering and administrative controls? [68.67(c)(4)] ☒ Stationary source siting? [68.67(c)(5)] ☒ Human factors? [68.67(c)(6)] ☒ An evaluation of a range of the possible safety and health effects of failure of controls? [68.67(c)(7)]	☒Y ☐N ☐N/A Hydrotreater July 2016 ThioSolv 2015
10. Was the PHA performed by a team with expertise in engineering and process operations and did the team include appropriate personnel? [68.67(d)]	☒Y ☐N ☐N/A
11. Has the owner or operator established a system to promptly address the team's findings and recommendations; assured that the recommendations are resolved in a timely manner and documented; documented what actions are to be taken; completed actions as soon as possible; developed a written schedule of when these actions are to be completed; and communicated the actions to operating, maintenance, and other employees whose work assignments are in the process and who may be affected by the recommendations? [68.67(e)]	☐Y ☒N ☐N/A
12. Has the PHA been updated and revalidated by a team every five years after the completion of the initial PHA to assure that the PHA is consistent with the current process? [68.67(f)]	☐Y ☐N ☒N/A
13. Has the owner or operator retained PHAs and updates or revalidations for each process covered, as well as the resolution of recommendations for the life of the process? [68.67(g)]	☒Y ☐N ☐N/A
Prevention Program- Operating procedures [68.69]	
14. Has the owner or operator developed and implemented written operating procedures that provide instructions or steps for conducting activities associated with each covered process consistent with the safety information? [68.69(a)]	☐Y ☒N ☐N/A

15 Do the procedures address the following: [68.69(a)] Steps for each operating phase: [68.69(a)(1)] ☒ Initial Startup? [68.69(a)(1)(i)] ☐ Normal operations? [68.69(a)(1)(ii)] Some normal operations are written ☐ Temporary operations? [68.69((a)(1)(iii)] ☐ Emergency shutdown including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner? [68.69(a)(1)(iv)] ☐ Emergency operations? [68.69(a)(1)(v)] ☐ Normal shutdown? [68.68(a)(1)(vi)] ☐ Startup following a turnaround, or after emergency shutdown? [68.69(a)(1)(vii)] Operating limits: [68.69(a)(2)] ☐ Consequences of deviations [68.69(a)(2)(i)] ☐ Steps required to correct or avoid deviation? [68.69(a)(2)(ii)] Safety and health considerations: [68.69(a)(3)] ☐ Properties of, and physical hazards presented by, the chemicals used in the process [68.69(a)(3)(i)] ☐ Precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment? [68.69(a)(3)(ii)] ☐ Control measures to be taken if physical contact or airborne exposure occurs? [68.69(a)(3)(iii)] ☐ Quality control for raw materials and control of hazardous chemical inventory levels? [68.69(a)(3)(iv)] ☐ Any special or unique hazards? [68.69(a)(3)(v)] ☐ Safety systems and their functions? [68.69(a)(4)]	☐Y ☒N ☐N/A
16. Are operating procedures readily accessible to employees who are involved in a process? [68.69(b)]	☐Y ☒N ☐N/A
17. Has the owner or operator certified annually that the operating procedures are current and accurate and that procedures have been reviewed as often as necessary? [68.69(c)]	☐Y ☐N ☒N/A
18. Has the owner or operator developed and implemented safe work practices to provide for the control of hazards during specific operations, such as lockout/tagout? [68.69(d)]	☐Y ☒N ☐N/A
Prevention Program - Training [68.71]	
19 Has each employee involved in operating a process, and each employee before being involved in operating a newly assigned process, been initially trained in an overview of the process and in the operating procedures? [68.71(a)(1)]	☐Y ☒N ☐N/A
20. Did initial training include emphasis on safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks? [68.71(a)(1)]	☐Y ☒N ☐N/A
21. In lieu of initial training for those employees already involved in operating a process on June 21, 1999, an owner or operator may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as specified in the operating procedures [68.71(a)(2)]	☐Y ☐N ☒N/A

22. Has refresher training been provided at least every three years, or more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process? [68.71(b)]	☐Y ☐N ☒N/A
23, Has owner or operator ascertained and documented in record that each employee involved in operating a process has received and understood the training required? [68.71(c)]	☐Y ☒N ☐N/A
24. Does the prepared record contain the identity of the employee, the date of the training, and the means used to verify that the employee understood the training? [68.71(c)]	☐Y ☒N ☐N/A
Prevention Program - Mechanical Integrity [68.73]	
25. Has the owner or operator established and implemented written procedures to maintain the on-going integrity of the process equipment listed in 68.73(a)? [68.73(b)]	☐Y ☒N ☐N/A
26. Has the owner or operator trained each employee involved in maintaining the on-going integrity of process equipment? [68.73(c)]	☐Y ☒N ☐N/A
27. Performed inspections and tests on process equipment? [68.73(d)(1)]	☒Y ☐N ☐N/A
28. Followed recognized and generally accepted good engineering practices for inspections and testing procedures? [68.73(d)(2)]	☐Y ☒N ☐N/A
29. Ensured the frequency of inspections and tests of process equipment is consistent with applicable manufacturers' recommendations, good engineering practices, and prior operating experience? [68.73(d)(3)]	☐Y ☒N ☐N/A
30. Documented each inspection and test that had been performed on process equipment, which identifies the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test? [68.73(d)(4)]	☐Y ☒N ☐N/A
31. Corrected deficiencies in equipment that were outside acceptable limits defined by the process safety information before further use or in a safe and timely manner when necessary means were taken to assure safe operation? [68.73(e)]	☐Y ☐N ☒N/A
32. Assured that equipment as it was fabricated is suitable for the process application for which it will be used in the construction of new plants and equipment? [68.73(f)(1)]	☒Y ☐N ☐N/A
33. Performed appropriate checks and inspections to assure that equipment was installed properly and consistent with design specifications and the manufacturer's instructions? [68.73(f)(2)]	☐Y ☒N ☐N/A
34. Assured that maintenance materials, spare parts and equipment were suitable for the process application for which they would be used? [68.73(f)(3)]	☒Y ☐N ☐N/A
Prevention Program - Management Of Change [68.75]	
35. Has the owner or operator established and implemented written procedures to manage changes to process chemicals, technology, equipment, and procedures, and changes to stationary sources that affect a covered process? [68.75(a)]	☐Y ☒N ☐N/A Policy was established, but not implemented.

36. Do procedures assure that the following considerations are addressed prior to any change: [68.75(b)] ☐ The technical basis for the proposed change? [68.75(b)(1)] ☐ Impact of change on safety and health? [68.75(b)(2)] ☐ Modifications to operating procedures? [68.75(b)(3)] ☐ Necessary time period for the change? [68.75(b)(4)] ☐ Authorization requirements for the proposed change? [68.75(b)(5)]	☒Y	☐N	☐N/A
37. Were employees, involved in operating a process and maintenance, and contract employees, whose job tasks would be affected by a change in the process, informed of, and trained in, the change prior to start-up of the process or affected parts of the process? [68.75(c)]	☐Y	☒N	☐N/A
38. If a change resulted in a change in the process safety information, was such information updated accordingly? [68.75(d)]	☐Y	☒N	☐N/A
39. If a change resulted in a change in the operating procedures or practices, had such procedures or practices been updated accordingly? [68.75(e)]	☐Y	☒N	☐N/A
Prevention Program - Pre-startup Safety Review [68.77]			
40. If the facility installed a new stationary source, or significantly modified an existing source, (as discussed at 68.77(a)) did it perform a pre-startup safety review prior to the introduction of a regulated substance to a process to confirm: [68.77(b)] ☐ Construction and equipment was in accordance with design specifications? [68.77(b)(1)] ☐ Safety, operating, maintenance, and emergency procedures were in place and were adequate? [68.77(b)(2)] ☐ For new stationary sources, a process hazard analysis had been performed and recommendations had been resolved or implemented before startup? [68.77(b)(3)] ☐ Modified stationary sources meet the requirements contained in management of change? [68.77(b)(3)] ☐ Training of each employee involved in operating a process had been completed? [68.77(b)(4)]	☐Y	☒N	☐N/A
Prevention Program - Compliance audits [68.79]			
41. Has the owner or operator certified that the stationary source has evaluated compliance with the provisions of the prevention program at least every three years to verify that the developed procedures and practices are adequate and being followed? [68.79(a)]	☐Y	☐N	☒N/A
42. Has the audit been conducted by at least one person knowledgeable in the process? [68.79(b)]	☐Y	☐N	☒N/A
43. Are the audit findings documented in a report? [68.79(c)]	☐Y	☐N	☒N/A
44. Has the owner or operator promptly determined and documented an appropriate response to each of the findings of the audit and documented that deficiencies had been corrected? [68.79(d)]	☐Y	☐N	☒N/A
45. Has the owner or operator retained the two most recent compliance reports? [68.79(e)]	☐Y	☐N	☒N/A
Prevention Program - Incident investigation [68.81]			
46. Has the owner or operator investigated each incident that resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance? [68.81(a)]	☐Y	☐N	☒N/A
47. Were all incident investigations initiated not later than 48 hours following the incident? [68.81(b)]	☐Y	☐N	☒N/A

48. Was an accident investigation team established and did it consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved work of a contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident? [68.81(c)]	☐Y ☐N ☒N/A
49. Was a report prepared at the conclusion of every investigation? [68.81(d)]	☐Y ☐N ☒N/A
50. Does every report include: [68.81(d)] ☒ Date of incident? [68.81(d)(1)] ☒ Date investigation began? [68.81(d)(2)] ☒ A description of the incident? [68.81(d)(3)] ☒ The factors that contributed to the incident? [68.81(d)(4)] ☒ Any recommendations resulting from the investigation? [68.81(d)(5)]	☐Y ☐N ☒N/A
51. Has the owner or operator established a system to address and resolve the report findings and recommendations, and are the resolutions and corrective actions documented? [68.81(e)]	☐Y ☐N ☒N/A
52. Was the report reviewed with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable? [68.81(f)]	☐ MACROBUTTON CheckIt
53. Has the owner or operator retained incident investigation reports for at least five years? [68.81(g)]	☐Y ☐N ☒N/A

Section D - Employee Participation [68.83]

1. Has the owner or operator developed a written plan of action regarding the implementation of the employee participation required by this section? [68.83(a)]	☒Y ☐N ☐N/A
2. Has the owner or operator consulted with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management in chemical accident prevention provisions? [68.83(b)]	☒Y ☐N ☐N/A
3. Has the owner or operator provided to employees and their representatives access to process hazards analyses and to all other information required to be developed under the chemical accident prevention rule? [68.83(c)]	☒Y ☐N ☐N/A

Section E - Hot Work Permit [68.85]

1. Has the owner or operator issued a hot work permit for each hot work operation conducted on or near a covered process? [68.85(a)]	☒Y ☐N ☐N/A
2. Does the permit document that the fire prevention and protection requirements in 29CFR 1910.252(a) have been implemented prior to beginning the hot work operations? [68.85(b)]	☐Y ☒N ☐N/A
3. Does the permit indicate the date(s) authorized for hot work and the object(s) upon which hot work is to be performed? [68.85(b]	☒Y ☐N ☐N/A
4. Are the permits being kept on file until completion of the hot work operations? [68.85(b)]	☒Y ☐N ☐N/A

Section F - Contractors [68.87]

1. Has the owner or operator obtained and evaluated information regarding the contract owner or operator's safety performance and programs when selecting a contractor? [68.87(b)(1)]	☐Y ☒N ☐N/A

2.	Informed contract owner or operator of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process? [68.87(b)(2)]	☐Y	☒N	☐N/A
3.	Explained to the contract owner or operator the applicable provisions of the emergency response or the emergency action program? [68.87(b)(3)]	☐Y	☒N	☐N/A
4.	Developed and implemented safe work practices consistent with §68.69(d), to control the entrance, presence, and exit of the contract owner or operator and contract employees in the covered process areas? [68.87(b)(4)]	☐Y	☒N	☐N/A
5.	Periodically evaluated the performance of the contract owner or operator in fulfilling their obligations (as described at 68.87(c)(1) – (c)(5))? [68.87(b)(5)]	☐Y	☒N	☐N/A

Section G - Emergency Response [68.90 - 68.95]

Developed and implemented an emergency response program as provided in 40 CFR 68.90-68.95? ☐S ☐M ☐U ☐N/A
Comments:

1.	Is the facility designated as a "first responder" in case of an accidental release of regulated substances"	☐Y	☒N	☐N/A
1.a.	If the facility is not a first responder:			
1.a.(1)	For stationary sources with any regulated substances held in a process above threshold quantities, is the source included in the community emergency response plan developed under 42 U.S.C. 11003? [68.90(b)(1)]	☒Y	☐N	☐N/A
1.a.(2)	For stationary sources with only regulated flammable substances held in a process above threshold quantities, has the owner or operator coordinated response actions with the local fire department? [68.90(b)(2)]	☒Y	☐N	☐N/A
1.a.(3)	Are appropriate mechanisms in place to notify emergency responders when there is need for a response? [68.90(b)(3)]	☒Y	☐N	☐N/A
2.	An emergency response plan is maintained at the stationary source and contains the following? [68.95(a)(1)] ☐ Procedures for informing the public and local emergency response agencies about accidental releases? [68.95(a)(1)(i)] ☐ Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures? [68.95(a)(1)(ii)] ☐ Procedures and measures for emergency response after an accidental release of a regulated substance? [68.95(a)(1)(iii)]	☐Y	☐N	☒N/A
3.	The emergency response plan contains procedures for the use of emergency response equipment and for its inspection, testing, and maintenance? [68.95(a)(2)]	☐Y	☐N	☒N/A
4.	The emergency response plan requires, and there is documentation of, training for all employees in relevant procedures? [68.95(a)(3)]	☐Y	☐N	☒N/A
5.	The owner or operator has developed and implemented procedures to review and update, as appropriate, the emergency response plan to reflect changes at the stationary source and ensure that employees are informed of changes? [68.95(a)(4)]	☐Y	☐N	☒N/A
6.	Did the owner or operator use a written plan that complies with other Federal contingency plan regulations or is consistent with the approach in the National Response Team's Integrated Contingency Plan Guidance (''One Plan'')? If so, does the plan include the elements provided in paragraph (a) of 68.95, and also complies with paragraph (c) of 68.95? [68.95(b)]	☐Y	☐N	☒N/A

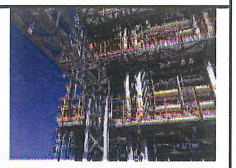
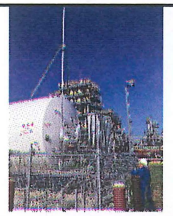
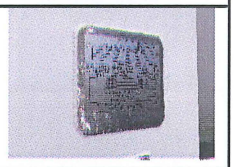
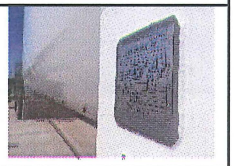
7. Has the emergency response plan been coordinated with the community emergency response plan developed under EPCRA? [68.95(c)]	☐Y	☐N	☒N/A

Section H – Risk Management Plan [40 CFR 68.190 – 68.195]

1. Does the single registration form include, for each covered process, the name and CAS number of each regulated substance held above the threshold quantity in the process, the maximum quantity of each regulated substance or mixture in the process (in pounds) to two significant digits, the five- or six-digit NAICS code that most closely corresponds to the process and the Program level of the process? [68.160(b)(7)]	☒Y	☐N	☐N/A
2. Did the facility assign the correct program level(s) to its covered process(es)? [68.160(b)(7)]	☒Y	☐N	☐N/A
3. Has the owner or operator reviewed and updated the RMP and submitted it to EPA [68.190(a)]? Reason for update: ☐ Five-year update. [68.190(b)(1)] ☐ Within three years of a newly regulated substance listing. [68.190(b)(2)] ☐ At the time a new regulated substance is first present in an already regulated process above threshold quantities. [68.190(b)(3)] ☐ At the time a regulated substance is first present in an new process above threshold quantities. [68.190(b)(4)] ☐ Within six months of a change requiring revised PHA or hazard review. [68.190(b)(5)] ☐ Within six months of a change requiring a revised OCA as provided in 68.36. [68.190(b)(6)] ☐ Within six months of a change that alters the Program level that applies to any covered process. [68.190(b)(7)]	☐Y	☐N	☒N/A
4. If the owner or operator experienced an accidental release that met the five-year accident history reporting criteria (as described at 68.42) subsequent to April 9, 2004, did the owner or operator submit the information required at 68.168, 68.170(j) and 68.175(l) within six months of the release or by the time the RMP was updated as required at 68.190, whichever was earlier. [68.195(a)]	☐Y	☐N	☒N/A
5. If the emergency contact information required at 68.160(b)(6) has changed since June 21, 2004, did the owner or operator submit corrected information within thirty days of the change? [68.195(b)]	☐Y	☐N	☒N/A

PHOTO LOG

Facility name and address: Gladieux Processing, Huntington, IN

Picture #	Date	Time picture taken	Position from where photo was taken	Specific place at facility where photo was taken	Name of person taking the picture	Names of witnesses present when photos were taken	Any other information	Thumbnail
1	7/11/18	09:19	W	Pipe rack from storage tanks to hydrotreater and Thiosolv	G. Chomycia	Tim Wagner, Alice Boomhower	Hydrogen, anhydrous ammonia, air and sulfur dioxide	
2	7/11/18	09:26	W	30,000 gallon Hydrogen storage tank	G. Chomycia	Tim Wagner, Alice Boomhower	Liquid side	
3	7/11/18	09:26	SW	Hydrogen tank	G. Chomycia	Tim Wagner, Alice Boomhower	Liquid side	
4	7/11/18	09:27	W	Hydrogen Tank Nameplate	G. Chomycia	Tim Wagner, Alice Boomhower	Liquid side	
5	7/11/18	09:28	W	Hydrogen Tank Nameplate	G. Chomycia	Tim Wagner, Alice Boomhower	Liquid side	

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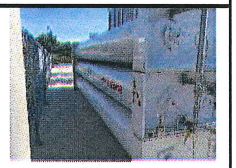
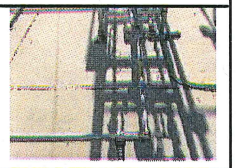
6	7/11/18	09:29		Hydrogen bullets nameplate	G. Chomycia	Tim Wagner, Alice Boomhower	Gas side	
7	7/11/18	09:29	N	Hydron Gas Storage (after gasification)	G. Chomycia	Tim Wagner, Alice Boomhower	Gas side	
8	7/11/18	09:33	Down	Responsibility transfer point	G. Chomycia	Tim Wagner, Alice Boomhower	Top of the picture is Airgas, bottom of picture is Gladieux	
9	7/11/18	09:36	W	Unloading station	G. Chomycia	Tim Wagner, Alice Boomhower	Anhydrous Ammonia (left) and Sulfur Dioxide (right)	

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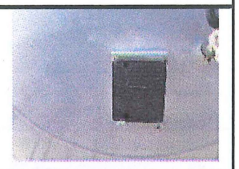
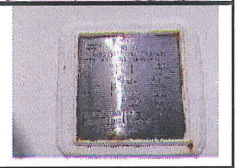
Picture #	Date	Time picture taken	Position from where photo was taken	Specific place at facility where photo was taken	Name of person taking the picture	Names of witnesses present when photos were taken	Any other information	Thumbnail
10	7/11/18	09:39	S	9,700 gallon Anhydrous Ammonia tank nameplate	G. Chomycia	Tim Wagner, Alice Boomhower		
11	7/11/18	09:39	S	Anhydrous Ammonia tank north end	G. Chomycia	Tim Wagner, Alice Boomhower		
12	7/11/18	09:39	S	Anhydrous Ammonia tank west side	G. Chomycia	Tim Wagner, Alice Boomhower		
13	7/11/18	09:43	W	6,000 gallon Sulfur Dioxide tank nameplate	G. Chomycia	Tim Wagner, Alice Boomhower		
14	7/11/18	09:43	W	Sulfur Dioxide tank relief valves	G. Chomycia	Tim Wagner, Alice Boomhower		
15	7/11/18	09:45	SW	Sulfur Dioxide tank sight glass	G. Chomycia	Tim Wagner, Alice Boomhower		

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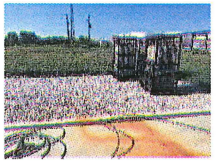
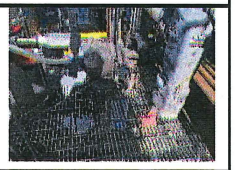
16	7/11/18	09:46	S	Bank of nitrogen cylinders used for pressure on Sulfur Dioxide storage tanks	G. Chomycia	Tim Wagner, Alice Boomhower	Note regulator and hose for Nitrogen pressure	
17	7/11/18	09:54	W	Hydrotreater (Ammonia entry, T-903)	G. Chomycia	Tim Wagner, Alice Boomhower		
18	7/11/18	09:54	W	Same as Photo 17	G. Chomycia	Tim Wagner, Alice Boomhower		
19	7/11/18	09:54	W	Hydrotreater (SO2 entry, T-903)	G. Chomycia	Tim Wagner, Alice Boomhower		
20	7/11/18	10:00		Hydrogen Entry in the diesel process	G. Chomycia	Tim Wagner, Alice Boomhower		

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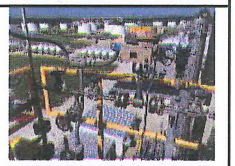
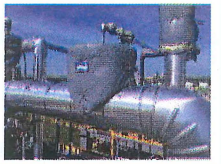
Picture #	Date	Time picture taken	Position from where photo was taken	Specific place at facility where photo was taken	Name of person taking the picture	Names of witnesses present when photos were taken	Any other information	Thumbnail
21	7/11/18	10:04	N	Hydrogen entry into top of the tower	G. Chomycia	Tim Wagner, Alice Boomhower		
22	7/11/18	10:04	W	Hydrogen control loop	G. Chomycia	Tim Wagner, Alice Boomhower		
23	7/11/18	10:05	E	Liquid Hydrogen tank, gasifier and gas bullets	G. Chomycia	Tim Wagner, Alice Boomhower		
24	7/11/18	10:05	E	Anhydrous Ammonia (top), Sulfur Dioxide tanks (bottom), and nitrogen supply (right)	G. Chomycia	Tim Wagner, Alice Boomhower		
25	7/11/18	10:05	S	Hydrogen entry (R-901B)	G. Chomycia	Tim Wagner, Alice Boomhower		

PHOTO LOG

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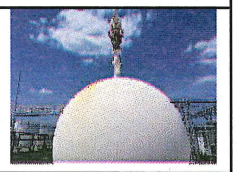
Picture #	Date	Time picture taken	Position from where photo was taken	Specific place at facility where photo was taken	Name of person taking the picture	Names of witnesses present when photos were taken	Any other information	Thumbnail
26	7/11/18	15:26	N	Sulfur Dioxide tank south end	G. Chomycia	Tim Wagner, Alice Boomhower	Note manual valve between PRV and tank without carseal	
27	7/11/18	15:32	W	Bullet #1 storing low molecular weight hydrocarbon	G. Chomycia	Tim Wagner, Alice Boomhower		
28	7/11/18	15:33	W	Bullet #4 storing low molecular weight hydrocarbon	G. Chomycia	Tim Wagner, Alice Boomhower		
29	7/11/18	15:33	W	Bullet #4 storing low molecular weight hydrocarbon	G. Chomycia	Tim Wagner, Alice Boomhower		
30	7/11/18	15:39	W	Bullet #6 storing low molecular weight hydrocarbon	G. Chomycia	Tim Wagner, Alice Boomhower